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The Bible Creation Story and Grand Canyon

The
BIBLE CREATION STORY
and
GRAND CANYON

By

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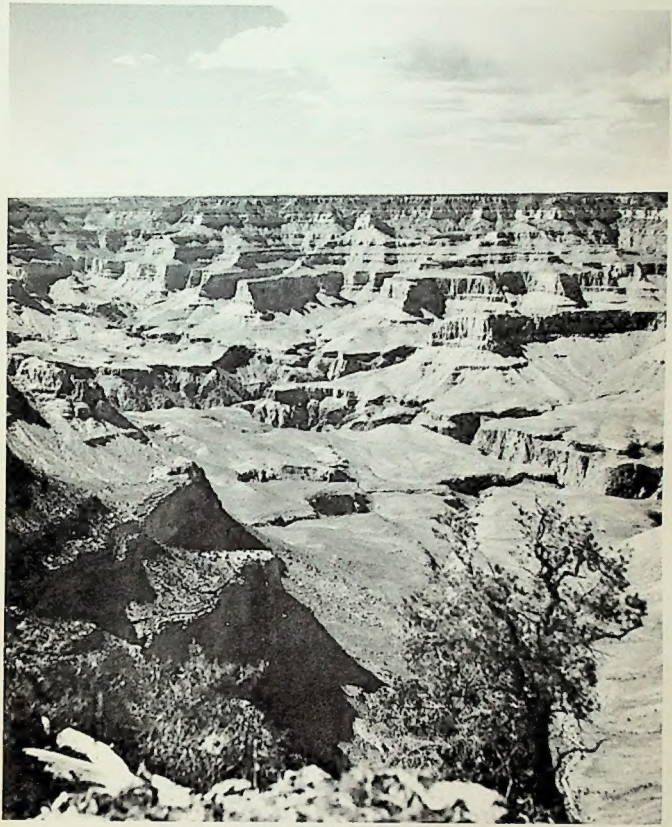
What force has formed this masterpiece of awe?
What Hands have wrought these wonders in the waste?
O river, gleaming in the narrow rift
Of gloom that cleaves the valley's nether deep.
Fierce Colorado, prisoned by thy toil,
And blindly toiling still to reach the sea,
Thy waters, gathered from the snows and springs
Amid the Utah hills, have carved this road
Of glory to the California Gulf.

—Henry Van Dyke



GRAND CANYON FROM SHOSHONE POINT SOUTH RIM
Photo - Department of Interior Grand Canyon National Park

FOREWORD

In Grand Canyon you and I see the irrefutable evidence of land building through the deposition of lime, muds, and sands and by the eruption of volcanic materials. The contortion and recrystallization of some of these rocks reveal the work of tremendous geologic forces which built great mountain ranges. Flat erosion surfaces buried beneath younger sedimentary rock layers tell of relentless weathering processes over eons of time, and of the repeated advance of ancient seas over the land. Fossilized plant and animal remains reveal the orderly succession and development of higher life forms.

But all this as well as science in general and even the concept of evolution itself are not incompatible with God and religion. Is it not merely the Almighty's way of doing things in His infinite wisdom? Happily, in these United States, it is the privilege of each man to interpret nature as he sees it and to form his own concept of worship.

The principle of the compatibility of the Bible Creation Story with the scientific Grand Canyon Story as presented by National Park Service naturalists in Grand Canyon National Park has been propounded by our great thinking men. For instance John Muir has said, "No synonym for God is so perfect as Beauty. Whether as seen carving the lines of the mountains with glaciers, or gathering matter into stars, or planning the movements of waters, or gardening—still all is Beauty."

—and William O. Douglass has stated that "One cannot reach the desolate crags . . . without deep and strange spiritual experiences. If he ever was a doubter, he will, I think, come back a believer. He will know there is a Creator."

Paul E. Schulz
Chief Park Naturalist
Grand Canyon National Park

PREFACE

UPON VISITING GRAND CANYON, and in response to the inspiration I received there with a little study of the geological aspect of it, I soon learned that right here was a bible in nature, revealing how the creation days of the earth fit in perfectly with the creation story of the Holy Bible. Something happened to me that deepened my faith and removed life-long questions about the handiwork of God. After this visit and study I am a much happier person, and my life has become much richer. It is for this reason I have written the treatise contained in this booklet. I entertain the hope that by sharing it many may find the same thrill and satisfaction, and that even those who doubt God's creation may find faith, and clearly see there is a divine Father who has made all things.

I am grateful to scientists and officials of the Grand Canyon Park Division for the encouragement that I have received from them in their approval of my treatment of this subject and request of the printing of these editions. I also appreciate suggestions and scientific improvements they have shared with me.

GEORGE W. WAHLIN

PSALM 148

Praise ye Jehovah.
Praise ye Jehovah from the heavens:
Praise him in the heights.
Praise ye him, all his angels:
Praise ye him, all his host.
Praise ye him, sun and moon:
Praise him, all ye stars of light.
Praise him, ye heavens of heavens,
And ye waters that are above the heavens.
Let them praise the name of Jehovah;
For he commanded, and they were created.
He hath also established them for ever and ever:
He hath made a decree which shall not pass away.
Praise Jehovah from the earth
Ye sea-monsters, and all deeps;
Fire and hail, snow and vapor;
Stormy wind, fulfilling his word;
Mountains and all hills;
Fruitful trees and all cedars;
Beasts and all cattle;
Creeping things and flying birds;
Kings of the earth and all peoples;
Princes and all judges of the earth;
Both young men and virgins;
Old men and children:
Let them praise the name of Jehovah;
For his name alone is exalted;
His glory is above the earth and the heavens.
And he hath lifted up the horn of his people.
The praise of all his saints;
Even of the children of Israel, a people near unto him.
Praise ye Jehovah.

VISITING GRAND CANYON, one of the greatest wonders of the world, one finds oneself overwhelmed at the beauty, and speechless at its vastness. After "coming to" a little, the first question that enters the mind is: "What happened?"

The answer is a long story of millions of years. "What happened" is really the big thing about Grand Canyon. The hugeness and inexpressible beauty are only a very small, superficial significance of this wonder of wonders.

Grand Canyon is the only place in the world that contains the five chapters of the earth's history. Several other parts of the earth reveal these geological eras, but not all five in one place.

The grandest thing about the Canyon is that it confirms the creation story of the Bible. These five chapters, or eras, fit perfectly into the periods of creation presented in the beginning of the Book of Genesis. To anyone who visits the Canyon and looks beyond the surface there can be no doubt of the Fatherhood of God and His handiwork.

The Grand Canyon was the first of the great American natural wonders to be discovered by white man. In 1540, only forty-eight years after Columbus discovered America, Don Lopez de Cardenas, a captain in Coronado's expedition, reached the brink of the South Rim with twelve hardy conquistadores. We can imagine the disappointment, after the struggle across the hot deserts, in search of the fabled "seven cities of gold." Unable to continue in the direction of their goal, they turned their faces toward Mexico, remembering they had seen rocks that "appeared about as tall as a man," but which were found by those who attempted, in vain, to descend to the Rio Colorado to be "taller than the great tower of Seville." Very likely this is the first recorded impression of the Grand Canyon.

From this reaction we learn in a small way how this spectacle defies all imagination. The Canyon is a mile deep,

217 miles long, and an average of ten miles wide. Its circumference is about 2,800 miles. The Canyon was formed by the cutting of the Colorado River during a period of seven to nine million years. This river of about 2,000 miles is the second longest river in the United States. It varies from 200 to 600 feet in width and normally from 12 to 40 feet in depth but which may reach as much as 100 feet in times of unusual flooding. It drops nine feet to the mile. One can hardly believe that it carries an average of half a million tons of sand and silt out of the Canyon every 24 hours on its way into the Gulf of California in Mexico, but this, in part, is the answer to "what happened?"

The rim of the Canyon is 7,000 feet above sea level on the south side and 8,000 feet on the north side; the difference is due to the slope of the broad dome. The bottom is 2,500 feet above sea level. Thus one can have snow at the rim in the winter and at the same time find a semi-tropical temperature at the bottom. There is literally a world in itself in the Canyon. A tribe of Indians, 240 in number, lives at the bottom. Here they farm and do other work to support themselves. Some of the children have not been up to see what is around them until they have reached the age of 14 years or more.

"What happened?" We have seen in part, but there is much more back of it all. Many explanations are given by Indian legends and would-be scientists. A persistent, but mistaken, idea ascribes the origin to contraction during the cooling of the earth's molten crust, at which time great cracks developed. This theory might be accepted, if any of the rocks of the walls were a part of the earth's original crust, but they are entirely sedimentary in origin.

During a long period of time, and maybe still in progress, the entire Grand Canyon area (river and all) was lifted by some internal force of the earth.

How erosion can cut these hard rocks is a wonder to many, but time makes things possible. Temperature changes by the warm sun and the cool nights cause the rocks to flake off and crumble down the canyon walls. The whipping around of the wind grinds away the softer material, leaving overhanging cliffs and windows in the rock. Many plants also destroy the walls. First tiny plants, notably lichens, make their way into the rocks' surface. Mosses, grasses, and vegetable debris and soil washed and blown into cracks and recesses from above open the way for still larger plants, thus continuing until even trees can grow. The trees force their roots into the walls and as the trees sway in the wind the roots pry loose blocks of rocks.

For eons the erosion has been cutting away the Canyon walls that now stand as geologist's paradise, for nowhere on the earth is as much history written as in these well-marked layers of rocks, which measure time not in centuries, but in millions and even hundreds of millions of years.

Have you not known? Have you not heard? The Lord is the everlasting God, the Creator of the ends of the earth. He does not faint or grow weary, His understanding is unsearchable.—Isaiah 40:28.

Many years ago, as I was riding on the train between Fargo and Bismarck, North Dakota, on my way to Wilton, just north of Bismarck, to serve my first parish as a student, there was only one other passenger on the train. He was a medical student on his way home from Northwestern University, Evanston, Illinois, to spend his summer vacation. Naturally, we entered into a conversation and soon were on the subject of God and the mysteries of creation. The medical student said: "After we have studied and have come to the point where we can go no further in explanation we all agree: 'In the beginning God,' and let it go at that." That

explains everything! As we stand at the rim of Grand Canyon and look beyond the walls, we agree, "In the beginning God created the heavens and the earth."

As we fit the five creation chapters of the Canyon into the first chapter of Genesis we are interrupted: "How about the creation story in the second chapter of Genesis, it contradicts the order of the first account?" But, that's a different story! In this second account the writer is not concerned with the scientific ideas of the world but with man's place in the world. He begins not with the universe but with man. He is interested not in the sun, moon and stars, but in man, made of the dust of the earth and subject to the earthly instincts which prove his undoing. The first story does not raise the question, "What happened to the man made in the image of God?" But in the second story the chief interest *is* in what happened to him. Did he fulfill the promise of his creation? No, he fell and brought about havoc with the divine purpose of creation. The burden of the writer of another creation story was to tell about the results of this fall.

Preceding the earth and other bodies coming into form—going back into eternity—there was only chaos: void and darkness. But the Spirit of God was upon it all. During this one day, eon, God brings light and order out of the primeval chaos. Here our earth was brought into its early form, but far from ready for life. Genesis 1:1-5.

1. The Early Precambrian Era

This is the first chapter of creation that we can read in the Canyon, and it corresponds to the second day in Genesis 1:6-8. "Let there be a firmament," or "expanse," as it is also called. The Hebrew root means to beat out, spread out: a vivid expression of heaven, as the earth takes more definite form out of the masses. We have here the organization of

the universe; the waters are separated and the earth and other bodies become more shaped. The heavy gases are lifted and thinned out, leaving a heaven approaching the order as we see it. We find this second day, or a small portion of it, revealed in the bottom of Grand Canyon. These are the oldest rocks known to man on the surface of the earth. Other rocks of this same era are found in the Rockies, the Adirondacks of New York, and eastern Canada. Some rocks of about the same age occur in Scandinavia, Brazil, China, India, and central Africa. Not only are we impressed by the depth of these rocks, a mile below the earth's surface, but we marvel more when we think of their great age and the events whose history they record. The great deposits of sand and mud of which these rocks were built up were bent by mighty crustal movements until high mountains like the Alps were formed. Pressures from the northwest and southeast evidently folded them. The rocks themselves were greatly compressed and heated, and brought into their present structure. These rocks, then, represent merely the roots of the once lofty mountains, and the flat surface cut on them is an old plain that resulted from the wearing down of high country in this region. Thus we see how the earth is being brought together into its form and nature as we know it now. It is taking shape, and the air around it is conditioning, so that life will soon be possible.

2. The Late Precambrian Era

In this chapter is the first sign of life. Genesis 1:9-13 gives the third creation day by showing how the earth is prepared for life. God separates the water from the land. "Let the dry land appear" shows that the land was already in existence beneath the waters. The water that covered the earth is gathered into oceans and the subterranean water areas. The heavy moist air around the earth is further con-

ditioned, "the waters are gathered together," receding so that the lowest type of plant life becomes possible. The ground and atmosphere continue to develop into conditions that bring about the highly developed plants and trees. All are made according to their kind by the Spirit of God.

The rocks found in Grand Canyon that make up this era give evidence of the earliest plant life. No traces of animal life have been seen in rocks of this chapter, anywhere. These rocks represent a period probably as great as all of subsequent time. The rocks of this region were bent and broken into mountains at an early date. These mountains are now missing, for they were worn away in large measure by slow erosion. Today only remnants—small hills on a general level surface—remain in the lower parts of the Canyon. The rocks of this era are roughly estimated to be at least six to seven hundred million years old. Preserved in these rocks we have sealed the oldest forms of life. This divine vault repeats the eternal words: "The earth brought forth vegetation, plants and trees, according to their own kind." A perfect creation so far, for "God saw that it was good."

3. The Paleozoic Era

According to Genesis 1:14-19, the atmosphere had by this time become completely purified—the sun, moon, and stars are unveiled in all their glory in the cloudless sky. David sees this same heaven in Psalm 19:1, "The heavens declare the glory of God, and the firmament showeth his handiwork." Day and night are distinct. The seasons of the year are evident. The earth is ready for still higher life, namely, that of animals.

In the rock formations of the third geological chapter are found evidences of animal life in well developed types. It was during this period that all of the apparently horizontal, upper layers in the Grand Canyon walls were formed. Some

of these rocks are sandstone, formed from the sands of early beaches or sand dune areas; others are shale—the hardened muds of ancient river deltas; and still others are limestone, built up by the accumulation of plant and animal remains on sea bottoms. All are rocks formed by the deposition of sediments largely by water, in ancient seas, some on land as flood plains, and even a few by the wind. In these are hidden many forms of life. Seashells, footprints, fern impressions, and various other traces of early life remain to tell us the story. In the earliest rocks of this era are found the first traces of animal life, in other rocks have been found evidences of primitive fish, and in the most recent rocks occur traces of early reptiles, insects, ferns, and cone-bearing plants. Examples of all of the fossils have been found in the walls of the Canyon. But let us remember that all these are mere glimpses of "what happened" during this era. Many periods are missing, yet we find enough signs to see the light of God.

4. The Mesozoic Era

In this chapter life is stepping up to a higher level. (Genesis 1:20-23) The fish become more developed and the birds come into being. The words "God created the great sea monsters" fit into this era which geologists call "the age of dinosaurs." At this time large reptiles were the dominating forms of life all over the world. Landscapes and types of climates varied considerably, and in the Grand Canyon region they changed completely several times. During some periods ocean bodies covered the country, at others desert winds piled up dunes on the surface. Again, this region was the flood plain of rivers, where pebbles, mud and great logs of pine were washed in and deposited. At still other times coal was formed in some quantity. Thus we can well understand how these giant reptiles became extinct. Dinosaur means

"terrible lizard." The dinosaurs were indeed monsters, as can be seen in the Painted Desert, east of Grand Canyon National Park, where they have left their foot tracks in rocks which were formed from river deposits of sands and mud. In other rocks have been found the bones of dinosaurs and other reptiles, and animals related to the frog or toad.

In the latest period of this era parts of Utah, Arizona, and New Mexico were apparently submerged beneath a sea. Mollusks and various other types of water animals swam or crawled in this region. Their shells are buried in the rocks which were formed during this time and are also seen "according to their kind." This Cretaceous period ended with a general change of conditions, or a revolution, the world over. Many of the seas were changed into land, new mountains were formed, and the dinosaurs and giant reptiles were largely replaced by mammals and other modern varieties of life.

God blessed them, saying, "Be fruitful and multiply." Life has risen above that of plants and lower animals where the reproduction is automatic; that of the higher animal kingdom is due to conscious will, and needs both divine authority and command.

5. The Cenozoic Era

Genesis 1:24-31 brings creation up to its highest stage and the crown and climax of all that God has made: man. The animals are given a threefold classification: "cattle"—domesticated animals, roughly Herbivora; "creeping things"—reptiles, insects, and very small quadrupeds; and "beasts of the earth"—wild beasts, roughly Carnivora. God said, "Let the earth bring forth living creatures according to their kind." Each species was not an accident, but God's definite plan, and He "saw that it was good." These were

drawn from the earth, as the fish were drawn from the sea. We are of the earth earthly: "The first man is of the earth" —a man of dust. 1 Corinthians 15:47.

The "Age of Mammals" is a name often applied to the last era. As the era progressed a development was noticeable, until finally in the very last part man himself appeared. God said, "Let us make man in our image, after our likeness; and let them have dominion over" all creation. Man was not made for all the things that God created, but the entire universe was made for man, for his good, and that he might glorify God through it all. All these years of creation were in preparation for man: now all is ready, now God can crown His creation by making a being in His own image, whom He places as His vicegerent.

"Let us make man." Here the Father is speaking to the other two persons in the Trinity, for we know they were present in the creation. Genesis 1:2, tells us that "the Spirit of God was moving over the face of the waters." In the other book which starts like Genesis: "In the beginning," namely St. John's Gospel, we are told in 1:3, that "all things were made through him (Christ) and without him was not anything made that was made."

Man is a special creation. He is God's image in that he is capable of communicating with God, which no animal is. The "image" includes spiritual powers, the power of thought, and a will to choose for himself. Man is a spiritual being, he is related to God by a spiritual bond. His creation is a covenant relationship. It is a Father-son relationship. It involves a limitation of the Creator-Father's powers in the interest of His creature-son: God blessed them, and God said to them, "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over" the land, the sea, and the air. In Psalm 8:5 and 6, David praises God, "Thou hast made him (man) little less than God, and dost crown

him with glory and honor. Thou hast given him dominion over the works of thy hands; thou hast put all things under his feet."

As we look into the deep Canyon and there read the chapters of creation we have only one confession to make: "In the beginning God." As we turn to the first chapter of the Book of Genesis and there read the same chapters of creation, again we ascribe all things to our heavenly Father. That He made all things "according to their kind" is also confirmed by St. Paul (1 Corinthians 15:38-41), "God gives it a body as he has chosen, and to each kind of seed its own body. For not all flesh is alike, but there is one kind for men, another for animals, another for birds, and another for fish. There are celestial bodies and there are terrestrial bodies; but the glory of the celestial is one, and the glory of the terrestrial is another. There is one glory of the sun, and another of the moon, and another glory of the stars; for star differs from star in glory."

SOURCES FOR THIS TREATISE:

A visit to Grand Canyon

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The Interpreter's Bible

Greetings

from

Grand Canyon, Arizona

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R. L. Baxter